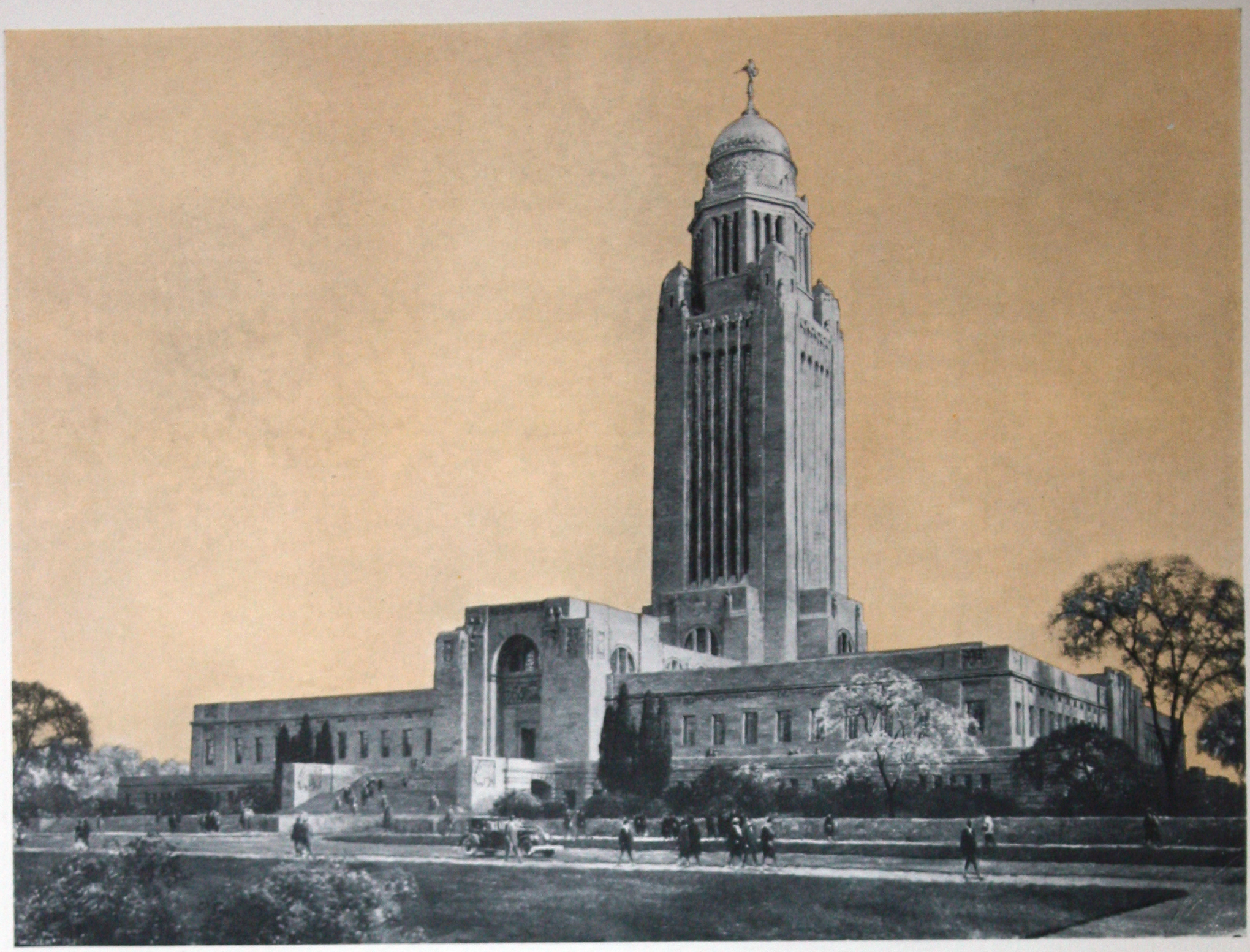


NEBRASKA STATE CAPITOL
LINCOLN, NEBRASKA

BERTRAM C. GOODHUE, *Architect*

Structural steel protected with No. 112 "R. I. W." Limestone damp-proofed and stain-proofed on five (5) unexposed sides with No. 110 "R. I. W." Exterior walls damp-proofed with No. 232 "R. I. W." Dome waterproofed with "R. I. W." Marine Cement and tile set in cement mortar waterproofed with "R. I. W." Toxement Paste. Portions of floors colored with Toch's No. 535 Sea Green Cement Color.

Make Steel Protection Permanent

THE protection of steel against corrosion is a subject that ought to engage the thoughtful consideration of the engineer, architect or contractor upon whom rests the responsibility of safeguarding the investments made in buildings, railroad bridges, viaducts, molasses and oil tanks and other steel or metal construction.

Years of unremitting toil and study are spent in mastering the theory of design and construction, and yet in many cases scarcely a thought is given to the fact that some of the greatest creations of engineering skill and practice are jeopardized by the failure to protect steelwork against corrosion induced by dampness, acids, alkalis, steam, heat, exposure, locomotive gases, electrolysis and other rust-producing agencies.

Buildings and other steel construction unprotected against corrosion are doomed to a comparatively short life. It is wise, therefore, to prevent the attack of corrosion—the destructive agent to which it is estimated the owners of buildings and other property in the United States of America pay three hundred millions of dollars annually—by the proper application of paints of high quality especially designed for the purpose.

Decide now to protect new construction and check the encroachment of rust on old buildings and other structures by the use of "R. I. W." Steel Preservative Paints which, because of the composition of their scientifically selected and balanced pigments and vehicles, may be truly classed as rust inhibitives.

Why a Cement Paint Should be Used as a Primer

For centuries it has been known that neat cement will protect metals from corrosion, but all experiments and researches on the question of a cement paint were unsuccessful until the invention of "R. I. W." Tockolith.

Pure portland cement mixed with water and applied to iron or steel with a brush is a useless and wasteful application. A thin film of cement cannot be made to set, because the water evaporates too quickly and leaves the cement in the form of a dry powder. The addition of deliquescent materials, principally chlorides, has been tried, and had to be abandoned for the reason that chlorides are rust producers instead of rust preventives. The invention of a proper vehicle to mix with the correct kind of cement has been solved in the Toch Laboratories, and the resultant patented cement gray paint, "R. I. W." Tockolith, has demonstrated its effectiveness as a priming coat for iron, steel and other metal.

"R. I. W." Tockolith contains a complex vehicle having the necessary stability and bonding properties, combined with basic pigment materials that function actively as rust inhibitors.

Instructions for the use of paint heretofore offered for coating steel state that it must not be applied to a rusty surface. The reason is that the ordinary yellow rust which forms on clean steel after a rain-storm will progress under a linseed oil paint.

We are able to state, however, that where "R. I. W." Tockolith is applied over this incipient yellow rust, its progress is permanently arrested. This is due to the chemical formation of calcium ferrite in conjunction with calcium aluminate.

Specific instructions to clean steel thoroughly before the application of paint are frequently only partially followed; therefore, architects and engineers should approve of the use of "R. I. W." Tockolith because it can be applied over incipient rust without depreciating its protective qualities.

[BLANK PAGE]

API INTERNATIONAL

CCA

R.I.W.
REMEMBER IT'S WATERPROOF
Reg. U. S. Pat. Off.

STEEL PRESERVATIVE PAINTS

TOCH BROTHERS

Established 1848
Division of Standard Varnish Works
Technical Paints and Waterproofing Compounds
443 FOURTH AVENUE, NEW YORK

R.I.W.
REMEMBER IT'S WATERPROOF
Reg. U. S. Pat. Off.

STEEL PRESERVATIVE PAINTS

PREVENT CORROSION INDUCED BY
ACIDS, ALKALIS, MOISTURE AND
OTHER RUST-PRODUCING AGENCIES

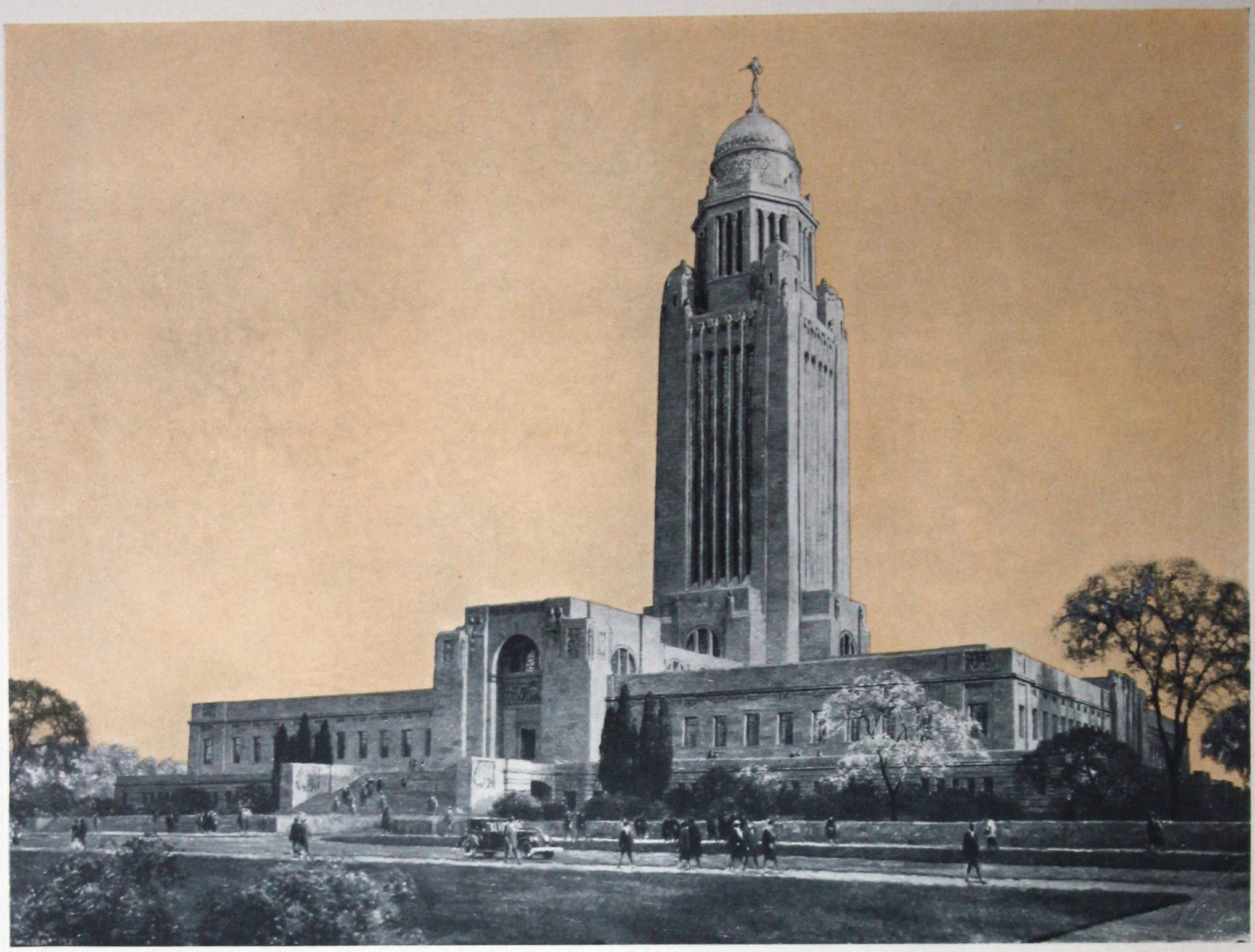
TOCH BROTHERS

Established 1848

Division of Standard Varnish Works

Technical Paints and Waterproofing Compounds

443 FOURTH AVENUE, NEW YORK



NEBRASKA STATE CAPITOL
LINCOLN, NEBRASKA

BERTRAM C. GOODHUE, *Architect*

Structural steel protected with No. 112 "R. I. W." Limestone damp-proofed and stain-proofed on five (5) unexposed sides with No. 110 "R. I. W." Exterior walls damp-proofed with No. 232 "R. I. W." Dome waterproofed with "R. I. W." Marine Cement and tile set in cement mortar waterproofed with "R. I. W." Toxement Paste. Portions of floors colored with Toch's No. 535 Sea Green Cement Color.

Make Steel Protection Permanent

THE protection of steel against corrosion is a subject that ought to engage the thoughtful consideration of the engineer, architect or contractor upon whom rests the responsibility of safeguarding the investments made in buildings, railroad bridges, viaducts, molasses and oil tanks and other steel or metal construction.

Years of unremitting toil and study are spent in mastering the theory of design and construction, and yet in many cases scarcely a thought is given to the fact that some of the greatest creations of engineering skill and practice are jeopardized by the failure to protect steelwork against corrosion induced by dampness, acids, alkalis, steam, heat, exposure, locomotive gases, electrolysis and other rust-producing agencies.

Buildings and other steel construction unprotected against corrosion are doomed to a comparatively short life. It is wise, therefore, to prevent the attack of corrosion—the destructive agent to which it is estimated the owners of buildings and other property in the United States of America pay three hundred millions of dollars annually—by the proper application of paints of high quality especially designed for the purpose.

Decide now to protect new construction and check the encroachment of rust on old buildings and other structures by the use of "R. I. W." Steel Preservative Paints which, because of the composition of their scientifically selected and balanced pigments and vehicles, may be truly classed as rust inhibitives.

Why a Cement Paint Should be Used as a Primer

For centuries it has been known that neat cement will protect metals from corrosion, but all experiments and researches on the question of a cement paint were unsuccessful until the invention of "R. I. W." Tockolith.

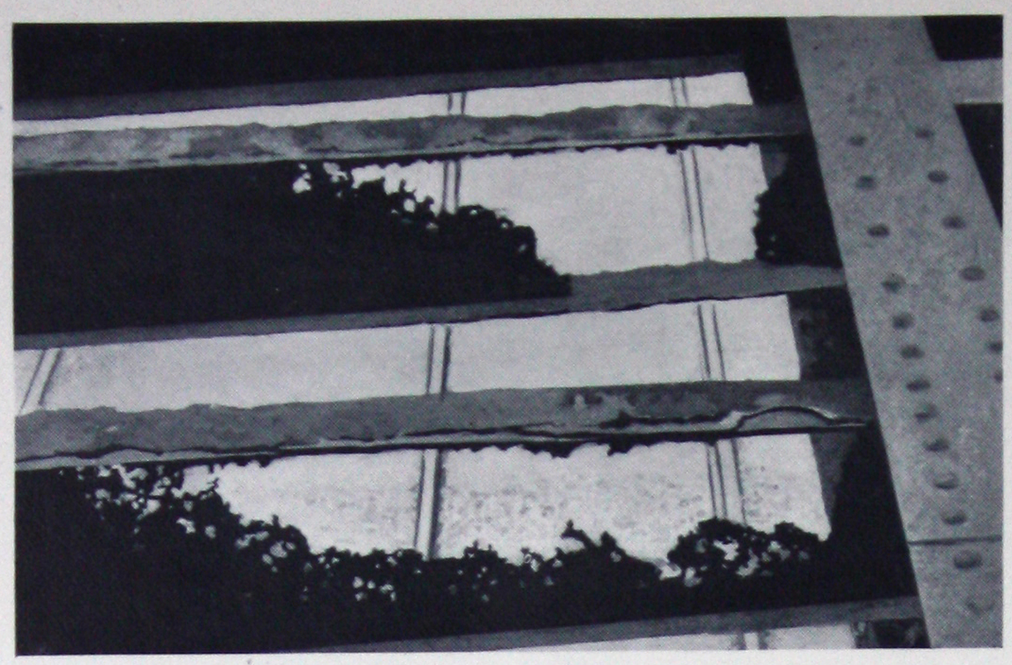
Pure portland cement mixed with water and applied to iron or steel with a brush is a useless and wasteful application. A thin film of cement cannot be made to set, because the water evaporates too quickly and leaves the cement in the form of a dry powder. The addition of deliquescent materials, principally chlorides, has been tried, and had to be abandoned for the reason that chlorides are rust producers instead of rust preventives. The invention of a proper vehicle to mix with the correct kind of cement has been solved in the Toch Laboratories, and the resultant patented cement gray paint, "R. I. W." Tockolith, has demonstrated its effectiveness as a priming coat for iron, steel and other metal.

"R. I. W." Tockolith contains a complex vehicle having the necessary stability and bonding properties, combined with basic pigment materials that function actively as rust inhibitors.

Instructions for the use of paint heretofore offered for coating steel state that it must not be applied to a rusty surface. The reason is that the ordinary yellow rust which forms on clean steel after a rain-storm will progress under a linseed oil paint.

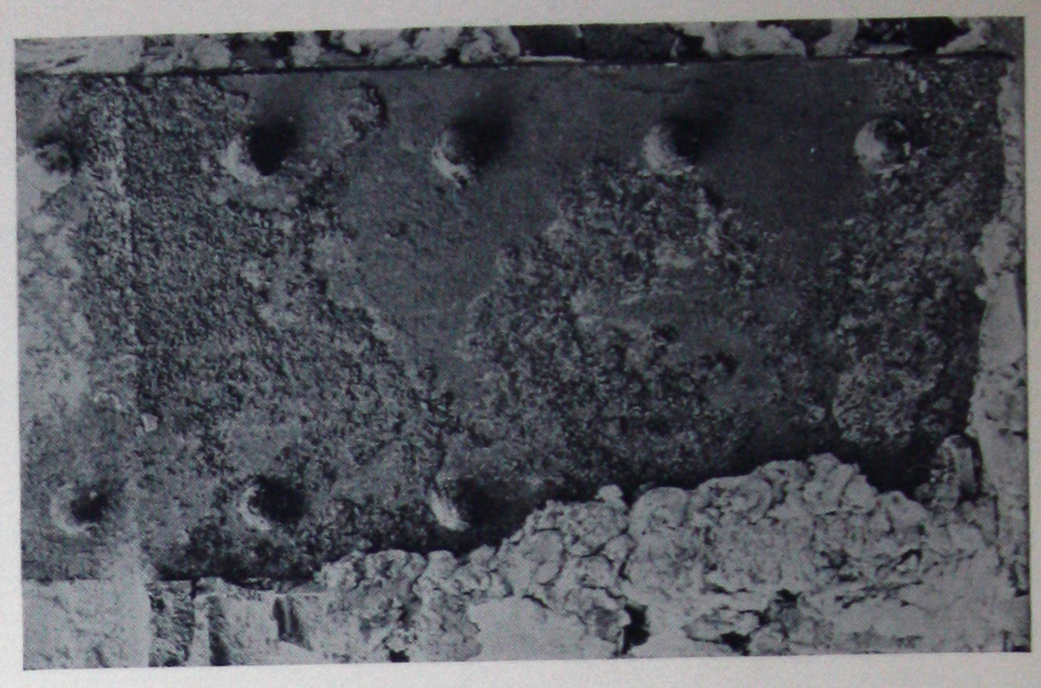
We are able to state, however, that where "R. I. W." Tockolith is applied over this incipient yellow rust, its progress is permanently arrested. This is due to the chemical formation of calcium ferrite in conjunction with calcium aluminate.

Specific instructions to clean steel thoroughly before the application of paint are frequently only partially followed; therefore, architects and engineers should approve of the use of "R. I. W." Tockolith because it can be applied over incipient rust without depreciating its protective qualities.



STEELWORK OF POLK STREET VIADUCT, CHICAGO, ILL.
PAINTED WITH A LINSEED OIL PAINT

Locomotive gases containing free sulphur at high temperature quickly corrode bridge steel which has not been protected properly, as this illustration shows. The timely use of "R. I. W." Steel Preservative Paints would have prevented corrosion under these conditions.



CORRODED STEEL COLUMN OF A PROMINENT BUILDING ON
FIFTH AVENUE, NEW YORK

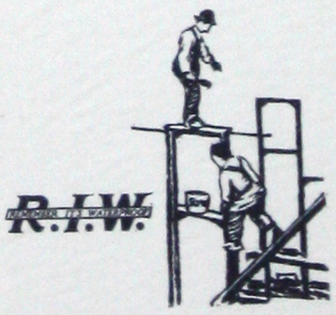
This column shows the unsuitability of a linseed oil paint for preserving steel which comes in contact with cement mortar or any alkaline building material. Tockolith and "R. I. W." are not affected by the alkalinity of cement mortar and concrete, and are perfect rust preventives.

We do not claim that "R. I. W." Tockolith or any other priming coat for steel or metal will give good results if applied over scale, dirt or loose particles; however, a sufficiently firm foundation may be obtained for this paint without going to the expense of sand blasting.

"R. I. W." Tockolith is patented both as a dry material and mixed ready for use. It is invariably sold in ready-mixed form and should be stirred thoroughly immediately prior to its application. Within 12 to 24 hours it sets hard enough to withstand handling in transportation.

While the selection of the correct priming paint is important, care should also be exercised to choose a finishing paint that is impervious to dampness, acids, alkalis, electrolysis and other conditions steel must withstand. These finishing paints may be had in a variety of shades and will be found described on pages 8 to 15.

The "R. I. W." paints and compositions years ago revolutionized and marked an epoch in building construction. Pioneers in the field, they continue today to be foremost in quality, results and in extensive use on all types of structures.



Steel Protection

Priming or Shop Coats

"R. I. W." TOCKOLITH*

Covers approximately 500 to 700 sq. ft. per gal., one coat.

The portland cement paint, gray in color, used only as a priming coat on iron, steel or other metal.

Must be painted over as soon as practicable, and in any event not more than four to six months after application.

A finishing coat must always be applied according to the character of the finished surface required and the nature of the service expected.

Unique, in that it can be applied over incipient rust without depreciating its protective value.

An unexcelled combination for preventing chemical or electrolytic corrosion is "R. I. W." Tockolith for the priming coat and "R. I. W." Damp-Resisting Paint for the finishing coat.

Endorsed by leading engineers, architects and builders of the country.

Used on the steelwork of many notable structures.

NOTE: No. 9 "R. I. W." Tockolith should be used in preference to the regular grade of "R. I. W." Tockolith for the priming coat where conditions in the field, or the probable length of time required for the transportation of the steel from the fabricating shop to the field, would indicate that from six to twelve months will elapse between the applications of the priming and finishing coats.

No. 9 "R. I. W." TOCKOLITH*

Covers approximately 500 to 700 sq. ft. per gal., one coat.

The portland cement paint, very deep gray in color, used only as a priming coat on iron, steel or other metal.

A finishing coat must always be applied according to the character of the finished surface required and the nature of the service expected.

Recommended in preference to the regular grade of "R. I. W." Tockolith, where conditions in the field, or the probable length of time required for the transportation of the steel from the fabricating shop to the field, would indicate that from six to twelve months will elapse between the applications of the priming and finishing coats.

The reason for this is that much of the active pigment material is slightly soluble in water, and since the film of "R. I. W." Tockolith is only of average paint thickness, excessive exposure to rain would wash out too great a portion of the active substance.

No. 9 "R. I. W." Tockolith is particularly adapted for preserving the steelwork of railroad bridges and other exposed structures.

When repainting a bridge we recommend that all loose scale be cleaned off, and a coat of No. 9 "R. I. W." Tockolith applied to the rust spots, and if necessary, over the entire structure.

A finishing coat of one of the following paints should be applied over the entire structure when the surface is perfectly dry:

No. 49 "R. I. W." (black or dark olive green).

No. 1379 "R. I. W." (maroon).

No. 1087-A "R. I. W." (black, dark red, brown or dark green).

"R. I. W." Battleship Gray (No. 491 Dark or No. 4700 Light).

No. 1087-A "R. I. W." DAMP-RESISTING PAINT

Covers approximately 500 to 600 sq. ft. per gal., one coat.

An interior and exterior exposure, quick-drying, acid-proof, alkali-proof, and waterproof paint for application to steel or wood.

Furnished regularly in black, dark red, brown and dark green shades.

Designing and constructing engineers frequently have to decide upon the advisability of painting or not painting steel which is to be covered with concrete. Under certain conditions, the usual shop coat of "R. I. W." Tockolith may be omitted and one coat of No. 1087-A "R. I. W." substituted.

If steel is left unpainted, it is possible that the initial rust may progress after the concrete has been applied, particularly if the concrete breaks or is porous. Moreover, if this rust is appreciable it prevents a bond between the steel and concrete, and as it progresses it increases in volume and tends to crack the concrete.

It has been demonstrated that the so-called "oil paints" advocated for the purpose are unsuitable because the alkali in the cement will saponify and destroy the linseed oil of the paint, and thus prevent a bond between the steel and concrete.

No chemical reaction occurs when No. 1087-A "R. I. W." is used. One good coat applied at the shop will protect steel until it is erected, and be cheaper than cleaning from unprotected steel the rust that forms during shipment and storage.

See page 13 for exterior uses.

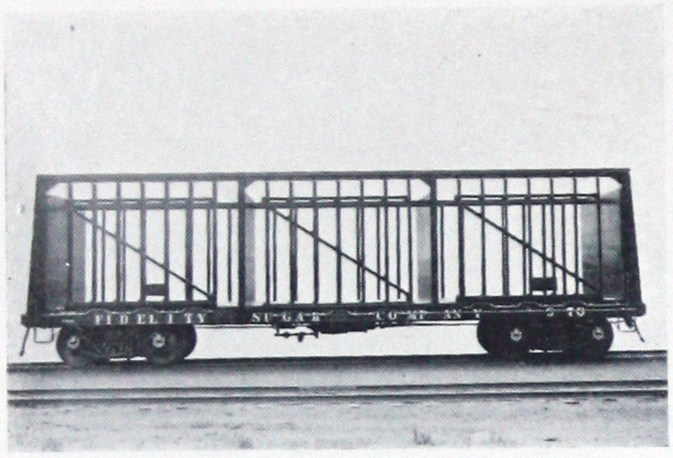
*Patented

HELL GATE BRIDGE

Over East River and Long Island Sound, New York

GUSTAV LINDENTHAL, *Chief Engineer, East River Division*

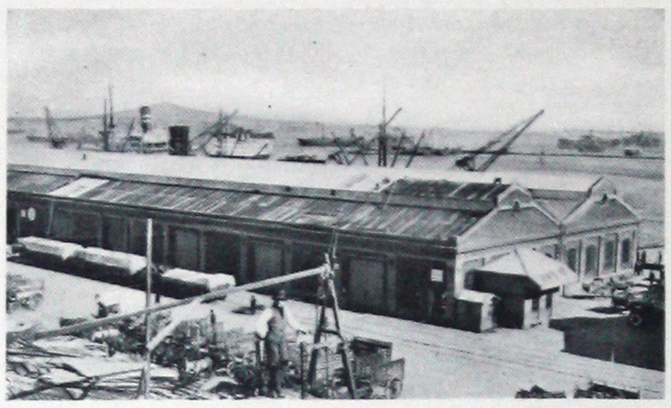
The largest bridge of its kind in the world, and cost more than $26,000,000. Nearly 100,000 tons of structural steel were required to build it, all of which was painted with "R. I. W." Tockolith, priming coat, over which was applied a coat of No. 49 "R. I. W." (black). Approximately 85,000 gallons of these paints were applied in 1913 and the bridge was repainted for the first time in 1925.



FIDELITY SUGAR CANE CAR CO.

E. ATKINS & Co.

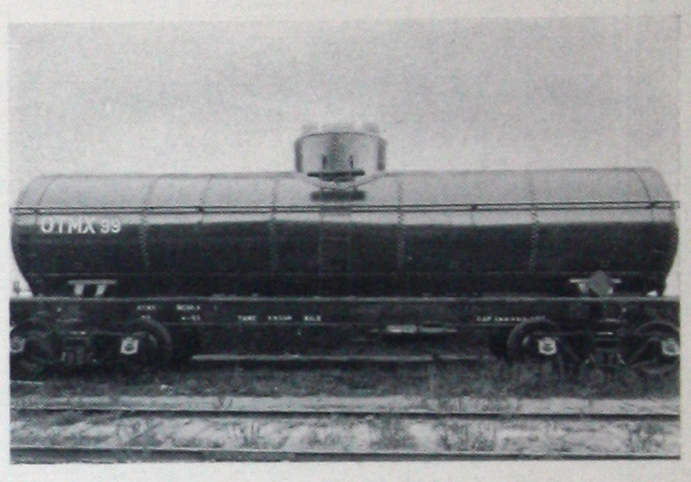
No. 708 "R. I. W." priming coat and No. 1017 "R. I. W." finishing coat preserve 150 new cane cars of this company.



CUSTOM HOUSE BUILDINGS

MONTEVIDEO, URUGUAY

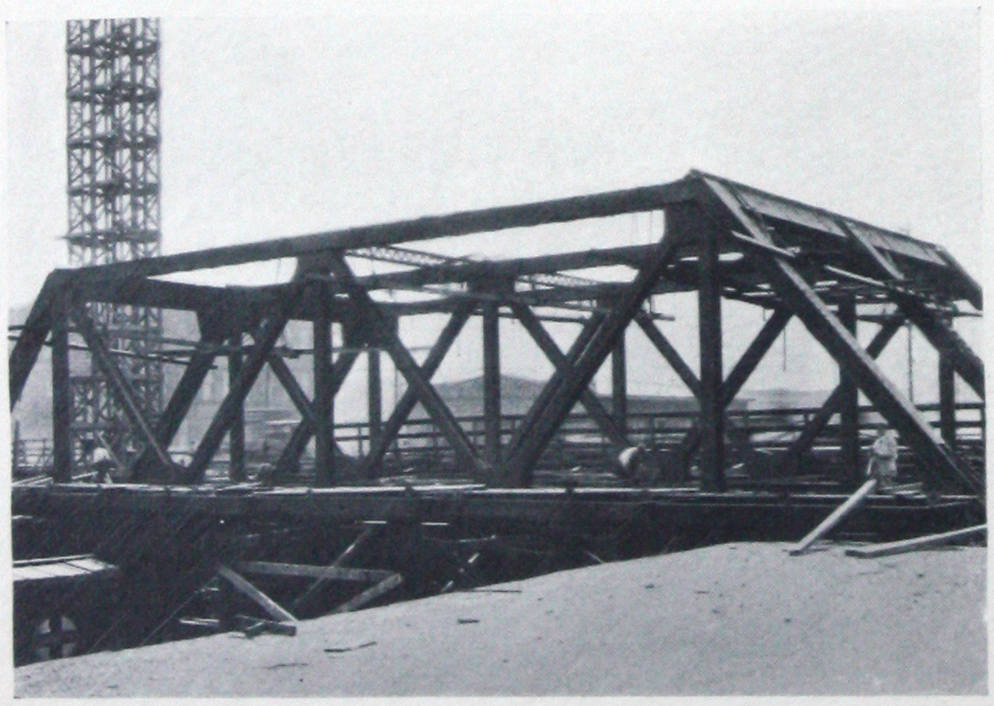
Over 400,000 square feet of corrugated galvanized iron roofing protected with No. 1017 "R. I. W." against salt atmosphere and fumes from vessels lying alongside.



MOLASSES TANK CAR

OLD TIME MOLASSES Co., HAVANA, CUBA

No. 1017 "R. I. W." used for the protection and maintenance of all the molasses tank cars of this company.



ROOSEVELT (12th) ST. VIADUCT, CHICAGO, ILL.

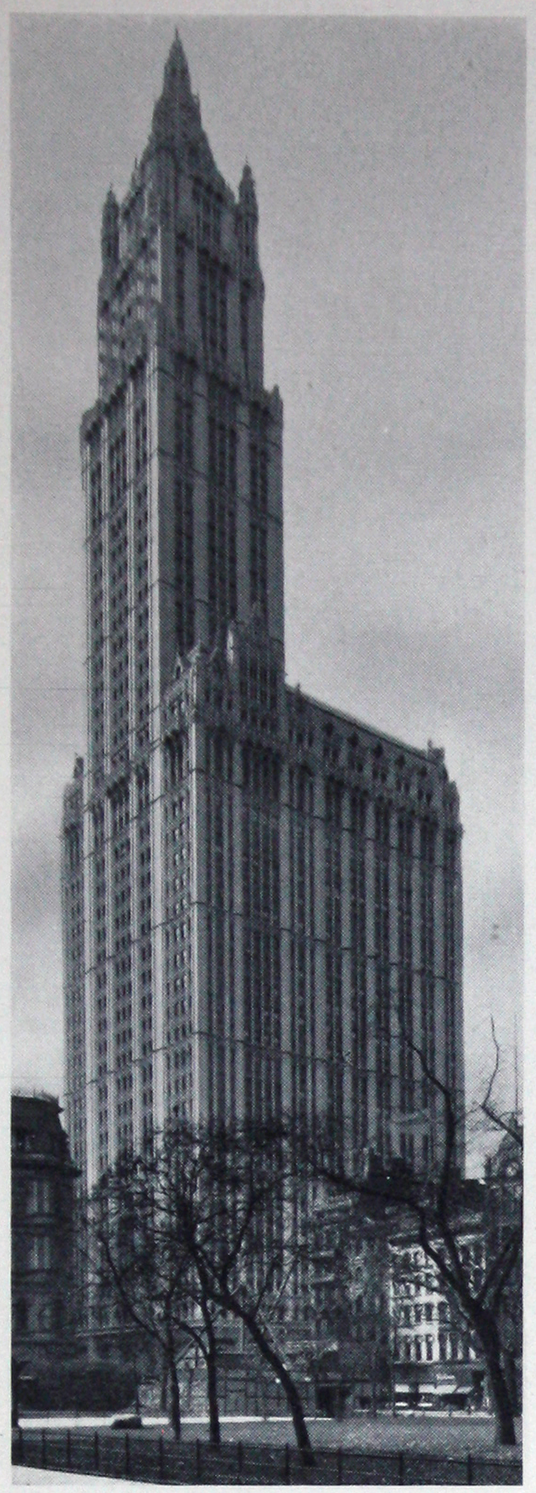
ATCHISON, TOPEKA & SANTA FE RAILWAY Co.

Erected in 1911. Replaced in 1923 by larger structure. "R. I. W." Tockolith and No. 49 "R. I. W." used on superstructure, and "R. I. W." Self-Healing Bridge Cement on stringers. Twelve years' service rendered by original coatings—an unusual record.

HAWK ST. VIADUCT, ALBANY, N. Y.

POST & DAVIS, *Consulting Engineers*

All steelwork protected with "R. I. W." Steel Preservative Paint (brown and green). One of the many structures on which "R. I. W." has proved its value in preventing corrosion.



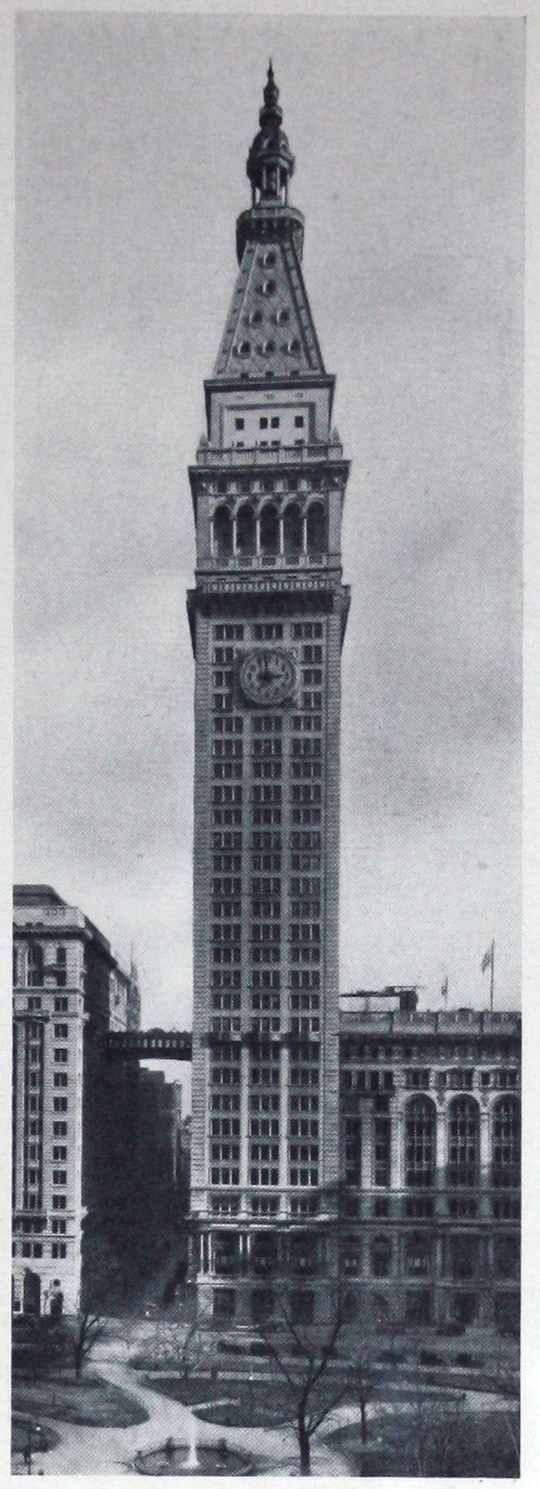
WOOLWORTH BUILDING
NEW YORK

55 Stories, 750 feet

CASS GILBERT, *Architect*

THOMPSON-STARRETT CO.
Builders

Concrete foundations waterproofed with "R. I. W." Toxement. Grillage beams, structural steel building frame and metal lath protected with No. 110 and No. 112 "R. I. W." Concrete floors decorated and dust-proofed with "R. I. W." Cement Filler and Cement Floor Enamel. "R. I. W." Verte Antique was used on the copper dome.



METROPOLITAN TOWER
NEW YORK

50 Stories, 700 feet

N. LE BRUN & SONS, *Architects*

HEDDEN CONSTRUCTION CO.
Builders

Steelwork painted with "R. I. W." Tockolith priming coat and No. 112 "R. I. W." Damp-Resisting Paint finishing coat to protect it permanently from chemical or electrolytic corrosion. Exterior walls dampproofed with No. 232 "R. I. W." which saves the cost of furring and lathing and bonds perfectly with hard wall plaster.

Specifications

For Applying Priming or Shop Coats of "R. I. W." Tockolith, No. 9 "R. I. W." Tockolith and No. 1087-A "R. I. W."

(a) **General:**

The priming or shop coat to be used on the work shall be (here the architect or engineer will specify which of the paints referred to above shall be used) manufactured by and used in accordance with the directions of Toch Brothers, Inc., New York, N. Y.

All paint shall be delivered in the original unbroken packages.

(b) **Preparation of Surface:**

The priming or shop coat of (here the architect or engineer will specify the name of the paint) shall not be applied to any surface until the steel has been cleaned and is free from rust, dirt, loose scale, oil and grease, and is perfectly dry.

(c) **Shop Coat:**

Surfaces which are to be riveted together in the shop shall be cleaned and given one thorough coat of paint on each surface before assembling. This paint shall be worked into all joints and crevices. Any parts which are to be riveted together on the field shall receive two coats of (insert name of paint) before leaving the shop. The first coat must be perfectly dry before the second coat is applied. All work shall be painted at least forty-eight hours before shipment. Erection marks shall be painted on the painted surfaces.

(d) **Painting:**

Painting shall be done with round brushes of good quality, having long bristles, and by competent painters.

Painting shall not be done in damp or freezing weather, except under cover, and the steel must be free from moisture and frost when the paint is applied. Steel so painted shall be kept under cover until the paint is thoroughly dry.

NOTE: Where maximum protection is not required, and the initial cost per gallon is the prime factor in determining the paint to be used, a coat of No. 110 "R. I. W." or No. 112 "R. I. W.", described on page 8, may be applied instead of "R. I. W." Tockolith, No. 9 "R. I. W." Tockolith or No. 1087-A "R. I. W."

ALTERNATE SPECIFICATIONS

All steelwork indicated in the drawings and specifications shall be given a continuous even coat of (here the architect or engineer will specify which grade of "R. I. W." shall be used) applied to the bare metal after it has been properly cleaned and is perfectly dry, in accordance with the directions of manufacturers, Toch Brothers, Inc., New York. The paint required for this work shall be delivered in the original unbroken packages.

Priming and Finishing Coats—Interior Steelwork

Grillages, Railroad Bridge Floors, Column Footings, Metal Lath, Steel Subject to Fumes of Acids or Alkalis, or Electrolytic Corrosion

No. 110 "R. I. W." DAMP-RESISTING PAINT

Covers approximately 250 to 400 sq. ft. per gal., one coat.

An interior exposure, waterproof paint.

Furnished either in black or maroon.

Usually applied over a priming coat of "R. I. W." Tockolith, but two coats may be applied without a primer, if desired.

Recommended as a finishing coat on structural grillage work which is to be embedded in masonry, also on railroad bridge floors and column footings; conduits, pipes and poles buried in the ground; sprinkler pipes, etc.

Adheres perfectly to concrete.

Preserves steelwork in factories or laboratories where paint is not subjected to atmospheric conditions, but must resist severe corroding agencies, such as the fumes of acids or alkalis.

Prevents corrosion of metal lath and staining of plaster. The lath should be dipped and redipped in a trough filled with No. 110 "R. I. W." which has been reduced to the proper consistency with "R. I. W." Thinners. Gasoline, benzine, kerosene and such diluents must not be used.

Has an insulation value of over 800 volts per millimeter.

Structural Steel Building Frame, Brine and Condenser Pipes, Steel Subject to Dampness, Acid or Alkali Fumes, or Electrolytic Corrosion

No. 112 "R. I. W." DAMP-RESISTING PAINT

Covers approximately 300 to 500 sq. ft. per gal., one coat.

A waterproof paint designed primarily for interior exposure, and for exterior exposure where the maximum protection afforded by such coatings as No. 49 "R. I. W." is not required.

Furnished either in black or maroon.

Recommended as a finishing coat over a priming coat of "R. I. W." Tockolith, but two coats may be used without a primer, if desired. When used for priming and finishing it is advisable to have the first coat a maroon shade, and the finishing coat black, in order to facilitate inspection.

Preserves structural steel building frame and steelwork inside of factories where dampness and acid or alkali fumes are present; also brine and condenser pipes.

Gives excellent results on steelwork of railway bridges, metal framework of cars subjected to brine drippings from refrigerator cars, and hulls of vessels above the water-line.

Prevents electrolytic corrosion of steel.

Has an insulation value of over 550 volts per millimeter.

Specifications

For Applying Finishing Coats of No. 110 "R. I. W." and No. 112 "R. I. W." on Grillages and Structural Steel Building Frame

(a) **General:**

The finishing coat of (here the architect or engineer will specify which of the two paints referred to above shall be used on the work) shall be the paint of that name manufactured by Toch Brothers, Inc., New York, N. Y., and shall be used in accordance with their directions. All paint shall be delivered at the building site in the original unbroken packages.

(b) **Preparation of Surface:**

After erection, the heads of field rivets and parts where the paint has rubbed off the steel in transportation or during erection, shall be given one coat of the priming or shop coat by the erector.

(c) **Field Coat:**

All erected steelwork below grade level which is to be encased or embedded in masonry shall receive one continuous, even coat of No. 110 "R. I. W." Damp-Resisting Paint.

Structural steel building frame which is to be encased in building materials shall receive one continuous, even coat of No. 112 "R. I. W." Damp-Resisting Paint.

(d) **Painting:**

At least forty-eight hours shall elapse between the application of any two coats of paint.

Painting shall be done with round brushes of good quality, having long bristles, and by competent painters.

Painting shall not be done in damp or freezing weather, except under cover, and the steel must be free from moisture or frost when the paint is applied. Steel so painted shall be protected from the weather until the paint is thoroughly dry.

ALTERNATE SPECIFICATIONS

The "R. I. W." to be used on the work shall be the Damp-Resisting Paint of that name, manufactured by Toch Brothers, Inc., New York, and applied in accordance with their directions. All paint shall be delivered at the building site in the original unbroken packages.

Grillages and other erected steelwork below grade which are to be encased or embedded in masonry shall be given a continuous even coat of No. 110 "R. I. W."

Structural steel building frame and other steelwork above grade which are to be encased or embedded in masonry shall be given a continuous even coat of No. 112 "R. I. W."

Dynamos, Transformers, All Classes of Machinery (All Colors)

"R. I. W." MACHINERY ENAMEL

Covers approximately 300 to 400 sq. ft. per gal., one coat.

Intended for use on dynamos, transformers, steam and electric stationary engines, compressors, lathes, planers, mill and other machinery, and guards, rails, etc., not exposed to the elements.

"R. I. W." Machinery Enamel protects metal from corrosion and is not affected by heat, oil or moisture.

Furnished in white, black and a wide variety of attractive colors—gray, orange, blue, green, vermilion, yellow, brown, etc.

Light colored enamel on machines brightens the dark corners and brings out in relief the finer pieces of mechanism, thus easing the strain on the operators' eyes and reducing spoilage and accidents to the minimum.

Internal-combustion engines should be painted with "R. I. W." Gas Engine Enamel, which dries slowly with a full, oil-proof gloss. Furnished in two standard shades of gray.

Tanks for Drinking Water—Interior Priming Coat

No. 3192 "R. I. W."

Covers approximately 350 to 400 sq. ft. per gal., one coat.

A gray, waterproof priming coat for protecting the interior of metal or wood drinking water tanks or vessels. Does not affect the taste of the water.

If possible, steel surfaces should be wiped with turpentine before this material is applied.

Can be used on concrete to which has been applied a priming coat of "R. I. W." Cement Filler (patented) to neutralize the lime in the concrete.

Interior Finishing Coat

No. 1429 "R. I. W."

Covers approximately 300 to 400 sq. ft. per gal., one coat.

A rich red, waterproof paint for protecting the interior of drinking water tanks or vessels.

Two coats should be applied over the priming coat of No. 3192 "R. I. W." Allow at least twenty-four hours to elapse between coats.

Do not subject the paint to the action of water until the finishing coat has hardened at least twenty-four hours under proper drying conditions.

No. 1429 "R. I. W." has the unique property of preserving the interior of tanks or vessels without affecting the taste of the water stored therein.

Water, Oil, Gas and Other Pipe Lines, Sprinkler System (All Colors)

"R. I. W." PIPE ENAMEL

Covers approximately 300 to 350 sq. ft. per gal., one coat.

Allowing pipes to rust is a costly form of neglect. There is not only the cost of the pipe to be considered, but the handicap to plant production which often occurs.

Plant managers with an eye to safety and economy now paint piping with "R. I. W." Pipe Enamel.

Each pipe line should be painted a different color, and these colors standardized. This not only saves time by making it easier to tell the lines apart, but in case of emergency may mean the saving of hundreds of dollars by being able to effect repairs quickly.

"R. I. W." Pipe Enamel safeguards all piping—water, oil, gas, sprinkler system, etc.—against rust and corrosion caused by steam, water and acid fumes.

Furnished in white, black, yellow, green, red, blue or any other color desired, so that the various pipe lines may be readily distinguished in all parts of the plant.

Submerged Steelwork, Floor Systems of Steel Bridges, Railroad Bridge Floors, Etc.

"R. I. W." SELF-HEALING BRIDGE CEMENT

Covers approximately 20 sq. ft. per gal., one coat.

This material is waterproof, adhesive, cohesive, elastic, non-hardening, acid-proof and alkali-proof.

Its salient characteristics are its adhesiveness and elasticity, which it retains even at low temperature.

"R. I. W." Self-Healing Bridge Cement is particularly adapted for protecting submerged steelwork, such as transfer bridges, caisson gates, etc.; floor systems of steel bridges over railroad tracks, steel subject to brine drippings from refrigerator cars, turntable and scale pits, concrete storage-tanks in which dilute acids and alkalis are stored and for many other purposes.

In conjunction with a fabric it provides a truly elastic membrane for waterproofing thin wall reinforced concrete foundations, railroad bridge floors and other structures where the membrane type of waterproofing is necessary.

This material should be heated in the usual form of melting pot before application.

Also furnished in liquid form for brush application, without heating, to the bottom of girders and other places where the use of a material of brushing consistency is essential.

Interiors of Tank Cars and Tanks Containing Vegetable or Mineral Oils

No. 56 "R. I. W." PRESERVATIVE FILLER

Covers approximately 200 to 300 sq. ft. per gal., one coat.

This paint is of an alcoholic nature, violet brown in color, adapted for application to steel or concrete.

Prevents the corrosion of the bottoms and sides of tank cars used for the transportation of vegetable or mineral oils, and tanks in which these materials are stored.

Equally good for preserving concrete tanks from the destructive action of oils, and preventing the loss which occurs from seepage.

May also be used for protecting the interior of tanks in which drinking water is stored, as No. 56 "R. I. W." Preservative Filler will not contaminate water.

Priming Coat for Fire-proof Doors and Metal Window Frames

No. 969 "R. I. W." CEMENT GRAY PAINT

Covers approximately 500 to 600 sq. ft. per gal., one coat.

A gray, waterproof, quick-drying, elastic paint for priming fire-proof doors and metal window frames.

Dries dust free within two hours and can be repainted within five hours under ordinary conditions.

IRAPUATO OUTDOOR SUB-STATION OF THE GUANAJUATO POWER & ELECTRIC COMPANY

Steelwork preserved with Toch Brothers' "R. I. W." Tockolith, anti-corrosive priming coat, and "R. I. W." Battleship Gray (light) finishing coat.

For Protecting Bright Parts of Machinery

"R. I. W." ANTI-RUST COMPOUND

Paste, Semi-Paste and Liquid

Costly machinery requires protection against damage caused by rust and corrosion, especially so when it is in transit, or idle in foundries, factories, manufacturing plants, mills, railroads, steamships and similar places.

"R. I. W." Anti-Rust Compound is a very efficient material for offsetting rust and corrosion under these conditions and has the additional property of being unaffected by extremes of heat or cold, and may be readily removed when the machinery is put in service. There is no need to heat it, thin it, or add anything to it; consequently it is always ready for use and no time need be lost in application.

"R. I. W." Anti-Rust Compound is made in three different consistencies, each designed for a particular purpose. There is a grade of this material in heavy paste form for use on large pieces of machinery, a semi-paste for application to smaller machinery parts, and a liquid of varnish-like consistency for use on small objects, and irregularly shaped made up parts.

Finishing Coats, Interior and Exterior Exposure, for Producing Corroded Copper Effect on Metal

"R. I. W." VERTE ANTIQUE

Covers approximately 400 sq. ft. per gal., one coat.

Made in two grades, one for interior and the other for exterior use.

For coating brass, copper and other surfaces to obtain an antique copper finish.

Chandeliers and other fixtures treated with this material have the appearance of old corroded copper.

Used on metal cornices, ornamental ironwork, grillework and similar surfaces over "R. I. W." Tockolith and "R. I. W." Antique Copper Ground Coat, to obtain an antique copper finish.

The "R. I. W." Verte Antique for exterior use has a percentage of free acid which combines with copper, dries slowly and withstands exposure to the elements.

Either may be applied with a sponge, rag, or brush to produce the effect desired.

Electrical Insulation—Armatures, Junction Boxes, Transformers, Acid Conditions, Etc.

No. 5 "R. I. W." INSULECTRIC

Covers approximately 300 to 500 sq. ft. per gal., one coat

A black, waterproof coating remarkable for these qualities:

It is a highly efficient non-conductor.

It is strongly acid resistant and withstands saline drippings.

Unequalled for electrical insulation of all kinds—armatures, transformers, junction boxes, storage-batteries, conduits, etc.

Also used as an acid-proof paint in storage-battery rooms where a quick-drying, acid-proof paint is desired.

Chlorine, Sulphuric and Acetic Acids, Etc., in Storage-Battery Rooms, Interior of Wooden Silos, Etc.

No. 44 "R. I. W." DAMP-RESISTING PAINT

Covers approximately 300 to 500 sq. ft. per gal., one coat.

Black, acid-proof, and moderately alkali-proof.

Resists the action of moderately strong sulphuric and hydrochloric acids, dilute nitric, acetic and organic acids; lime soda carbonate and salt solutions.

Used on hardwood laboratory table tops to resist moisture, sulphuric and organic acids.

Used extensively for painting exteriors of tanks, of either metal or wood, that are not exposed to the weather, and interior of wooden silos.

Has a record of three years and four months on brick walls, floors and ceilings of storage-battery rooms where the vapors of sulphuric acid were condensed upon it twice a day.

No. 44 "R. I. W." is slower drying than No. 5 "R. I. W." Insulectric.

Used largely on hoods, table tops and pipes in chemical laboratories.

Sulphuric Acid Conditions, Laboratories, Chemical Plants, Galvanizing and Plating Works

No. 9565 "R. I. W." DAMP-RESISTING PAINT

Covers approximately 500 to 600 sq. ft. per gal., one coat.

A black, waterproof, acid-resisting, high grade varnish paint.

Withstands 50 per cent. solution of sulphuric acid for two months without deterioration.

Used in laboratories, chemical works, galvanizing and plating works where sulphuric acid is used, in pickling baths and for coating trays, supports and spaces around lead storage batteries.

Excellent for painting steel cars in subways.

Dries in about one and one-half hours.

Paper Mills, Refrigerator Plants, Sugar Refineries, Pipes, Interior of Tanks, Etc.

No. 1375 "R. I. W." DAMP-RESISTING PAINT

Covers approximately 300 to 400 sq. ft. per gal., one coat.

A dark cherry red, quick-drying, acid-proof, moderately alkali-proof, waterproof paint for interior use.

Resists fumes of chemical gases, moisture or steam.

Used extensively for protecting the steelwork in paper mills, refrigerator plants, mines, subways, sugar refineries, and interior of tanks containing hot cane juice or syrup.

Recommended for painting brine, ice or steam pipes.

Mining Apparatus, Steel Embedded in Cinder Concrete, Interior of Wooden Vats, Etc.

No. 1402 "R. I. W." DAMP-RESISTING PAINT

Covers approximately 350 to 400 sq. ft. per gal., one coat.

A black, interior exposure, complex waterproof and alkali-proof paint suitable for preserving steel which is to be embedded in the ground or encased in cinder concrete.

Also used effectively for the protection of mining apparatus.

Largely used for painting the interior of wooden vats that contain alkaline materials for the treatment of boiler water, and vats containing 15 per cent. or less of potassium cyanide solution. Not recommended for painting tanks containing drinking water.

When painting the interior of vats, fresh air must be supplied the workmen on account of the solvent used in this paint.

Sulphur Fumes and Ammonia Gases in Chemical Plants and Laboratories

No. 708 "R. I. W."

Covers approximately 400 sq. ft. per gal., one coat.

A flexible, quick-drying, acid-proof and waterproof gray paint.

Furnished in priming and finishing coats.

The acid-proof quality of this paint has made it particularly valuable for protecting steelwork in chemical plants, being unaffected by sulphur fumes and ammonia gases.

See page 15 for description of exterior uses.

MT. SINAI HOSPITAL, NEW YORK, N. Y.

ARNOLD W. BRUNNER, *Architect*

Children's Dispensary, Servants' Building, Pathological Building and Superintendent's residence damp-proofed with No. 232 "R. I. W."

Nurses' Home now being erected (1926). ROBT. D. KOHN and CHAS. BUTLER, *Associated Architects*. Steelwork being protected with No. 50 "R. I. W.", maroon priming and black finishing coats.

MIDLAND PACKING CO.

SHANGHAI, CHINA

Even in far-off China the value of "R. I. W." Protective Products is recognized. In this packing plant the steelwork is protected with a priming coat of "R. I. W." Tockolith. In the chilling room "R. I. W." Liquid Konkerit and "R. I. W." Everlite Mill White afford unusually effective service under severe conditions.

AEOLIAN BUILDING, NEW YORK, N. Y.

WARREN & WETMORE, *Architects*

No. 708 "R. I. W." prevents corrosion of the steel of this famous radio station. This paint is used on numerous radio towers and other steel structures throughout the world. Building damp-proofed with No. 232 "R. I. W." applied to the interior surfaces of exposed walls, above grade level. Concrete floors made sanitary and dust-proof with "R. I. W." Cement Filler and "R. I. W." Cement Floor Enamel which are furnished in fourteen standard shades.

R. H. MACY & CO. BUILDING, NEW YORK, N. Y.

ROBT. D. KOHN, *Architect*

No. 50 "R. I. W." protects structural steel against corrosion. Ceiling slabs, concrete fire-proofing columns and brick walls to which no plastering was applied were primed with "R. I. W." Liquid Konkerit and finished with one coat of "R. I. W." Sanitary Enamel. Plastered walls received an additional priming coat and then the two coats previously mentioned. Brickwork of the outside of this building, from 10th to 20th story, treated with "R. I. W." Toxloxpore as an insurance against leakage.

Finishing Coats—Exterior Steelwork

Over Priming Coats of "R. I. W." Tockolith or No. 9 "R. I. W." Tockolith (See page 5)

Bridges, Tanks, Lined Smoke-stacks, Miscellaneous Exposed Metal Work, Etc.

No. 49 "R. I. W." DAMP-RESISTING PAINT

Covers approximately 700 to 900 sq. ft. per gal., one coat.

A high grade, exterior exposure paint which affords maximum protection.

Furnished in black or dark olive-green.

Specially recommended as a finishing coat over a priming coat of "R. I. W." Tockolith.

May be applied over other suitable priming paints, or two coats may be used without a primer.

Resists corrosion by atmospheric conditions, and the action of smoke gases, acids and other fumes to which railroad bridges and viaducts are subjected.

Used on tanks, lined smoke-stacks, and other important exposed surfaces where the maximum protection is required.

Furnished in dull or bauer-barff finish for application to interior wrought-iron railings and other ironwork, but this finish is not recommended for exterior work.

In three-coat work, such as on lined smoke-stacks and iron, steel or metal exposed to severe corrosive agencies, apply one coat each of "R. I. W." Tockolith, No. 1379 "R. I. W." and No. 49 "R. I. W."

No. 1379 "R. I. W." DAMP-RESISTING PAINT

Covers approximately 400 to 600 sq. ft. per gal., one coat.

A maroon color, exterior exposure paint for finishing the class of surfaces referred to in the description of No. 49 "R. I. W.," from which it differs only in color.

Specially recommended as a finishing coat over a priming coat of "R. I. W." Tockolith.

May be applied over other suitable priming paints, or two coats may be used without primer.

Bridges, Tanks, Fire Escapes, Composition Roofing

No. 1087-A "R. I. W."

Covers approximately 500 to 600 sq. ft. per gal., one coat.

A quick-drying, acid-proof, alkali-proof, and waterproof China Wood Oil, hydro-carbon paint for application to steel or wood.

Specially adapted for use as a second coat over "R. I. W." Tockolith in bridge maintenance work, and on tanks, fire-escapes, composition roofing, etc.

Furnished in black, red, brown or dark green.

Tin Roofs, Gutters, Miscellaneous Exposed Metal Work

No. 48 "R. I. W." DAMP-RESISTING PAINT

Covers approximately 400 to 600 sq. ft. per gal., one coat.

An exterior exposure paint of a rich reddish brown color.

Is acid-proof, but not alkali-proof.

Specially recommended as a finishing coat over a priming coat of "R. I. W." Tockolith.

May be applied over other suitable priming paints, or two coats may be used without primer.

Resists corrosion of iron, steel or other metal exposed to smoke fumes, moisture and atmospheric conditions, and is especially effective on tin roofs.

Gas Holders, Tanks, Roofs, Gutters and Steelwork in Chemical Plants

No. 137 "R. I. W."

Covers approximately 400 to 600 sq. ft. per gal., one coat.

A bright red paint intended primarily for exterior exposure, but is also adapted for interior exposure.

Generally used and strongly recommended as a finishing coat over a priming coat of "R. I. W." Tockolith, although two coats may be used without a primer, if desired.

Recommended for use on roofs, gutters, tanks, shutters and other structures exposed constantly to the weather.

Has wonderful resistance to the severe climatic conditions of the tropics.

A remarkable preservative of wood and metal subjected to acid fumes.

Gas Holders, Sugar Cane Cars, Tank Cars, Railway Equipment, Etc.

No. 1017 "R. I. W."

Covers approximately 250 to 300 sq. ft. per gal., one coat.

A quick-drying, waterproof, china wood oil varnish paint which is acid-proof and alkali-proof.

Usually furnished in black or red, but may be obtained in white, black and a variety of colors.

Highly resistant to the action of sugar juices, molasses, oil, gasoline, etc.

It is especially adapted for protecting steelwork and wood surfaces exposed to severe climatic conditions.

For maximum efficiency we recommend a priming coat of No. 708 "R. I. W.", described on page 11 and a finishing coat of No. 1017 "R. I. W."

When two coats of No. 1017 "R. I. W." are applied the first coat should be different in color from the finishing coat, in order to make sure that all surfaces are properly covered.

Oil and Molasses Tanks, Fire-escapes, Gas Holders, Vessels, Exterior Steelwork Exposed to Acid Conditions

"R. I. W." BATTLESHIP GRAY

Covers approximately 400 to 600 sq. ft. per gal., one coat.

Made in two shades of gray, for application to wood and metal subject to atmospheric conditions.

Generally used and strongly recommended as a finishing coat over a priming coat of "R. I. W." Tockolith.

May be applied over other suitable priming coats, or two coats may be used without a primer.

More flexible but not so acid-proof as No. 47 "R. I. W.", and is darker in color.

Particularly adapted for protecting vessels, molasses tanks, oil tanks, gas holders, fire-escapes and other exposed steel or metal structures.

Does not turn white, streak, or chalk near sea-water.

Does not absorb and intensify heat, and for that reason is used by many sugar centrales.

Dries with a tough elastic film in from seven to eight hours, under good drying conditions.

Oil Tanks, Miscellaneous Exterior Steelwork, Interior Steelwork Exposed to Acid Conditions

No. 47 "R. I. W."

Covers approximately 400 to 600 sq. ft. per gal., one coat.

A sulphur-proof and waterproof paint of a light Battleship Gray color somewhat lighter in shade than "R.I.W." Battleship Gray described opposite.

Intended primarily for exterior exposure over a priming coat of "R. I. W." Tockolith, but may also be used to protect interior steel in factories, laboratories, chemical plants, etc., subject to acid conditions.

May be applied over other suitable primers or two coats may be used without a primer if desired.

Particularly adapted for protecting the steel work of oil tanks, as it does not absorb and intensify heat.

More acid-proof and dries with a tougher film than "R. I. W." Battleship Gray, but is not quite so flexible.

Dries with a very tough elastic film in from three to five hours, under good drying conditions.

Specifications

For Applying Finishing Coats of No. 49 "R. I. W.", No. 1379 "R. I. W.", No. 1087-A "R.I.W.", No. 48 "R. I. W.", No. 137 "R. I. W.", No. 47 "R. I. W." and "R. I. W." Battleship Gray Over a Priming Coat of "R. I. W." Tockolith or No. 9 "R. I. W." Tockolith

(a) General:

The finishing coat of (here the architect or engineer will specify which of the paints described on pages 13 and 14 shall be used on the work), shall be the paint of that name manufactured by Toch Brothers, Inc., New York, N. Y., used in accordance with their directions, and shall be delivered at the building site in the original unbroken packages.

(b) Preparation of Surfaces:

Paint shall not be applied to any surface until the steel has been cleaned and is free from rust, dirt, loose scale, oil and grease, and is perfectly dry. No paint shall be applied in damp, foggy or freezing weather, and one coat of paint must be thoroughly dry before the next coat is applied.

(c) Finishing Coat:

In two-coat work, the finishing coat shall be (here the architect or engineer will select one of the following grades of "R. I. W."—No. 49, No. 1379, No. 137, No. 48 "R. I. W.", No. 1087-A, No. 47 "R. I. W." or Battleship Gray) where the steel is to be exposed continually to the action of light and to the elements.

In three-coat work, where black or dark olive-green is satisfactory as a finishing coat, No. 1379 "R. I. W." shall be used for the second coat and No. 49 "R. I. W." for the third or finishing coat.*

ALTERNATE SPECIFICATIONS

All steelwork indicated in the drawings and specifications shall be given a continuous even coat of (here the architect or engineer will specify which grade of "R. I. W." shall be used) over a priming coat of "R. I. W." Tockolith or No. 9 "R. I. W." Tockolith, in accordance with the directions of the manufacturers, Toch Brothers, Inc., New York. The paint required for this work shall be delivered on the job in the original unbroken packages.

*Note: In cases where No. 49 "R. I. W." (black and dark olive-green), No. 1379 "R. I. W." (maroon), No. 137 "R. I. W." (red), No. 1087-A "R. I. W." (black, red, brown and dark green), No. 47 "R. I. W." (light battleship gray), No. 48 "R. I. W." (reddish brown) and "R. I. W." battleship gray are not satisfactory for finishing coats on account of color, we shall be pleased to furnish sample charts and literature descriptive of other finishing paints.

Radio Towers and Other Exposed Steel Surfaces, Interior Steelwork in Chemical Plants Subject to Sulphur Fumes and Ammonia Gases

No. 708 "R. I. W."

Covers approximately 400 sq. ft. per gal., one coat.

An exterior and interior exposure, flexible, quick-drying, acid-proof and waterproof gray paint.

Furnished in first and finishing coats.

May be used on wood, concrete, and other surfaces over a suitable primer.

Adopted as a standard for painting radio towers and other exposed steel surfaces, because of its remarkable resistance to adverse climatic conditions in various countries.

The acid-proof quality of this paint has made it particularly valuable for protecting steelwork in chemical plants, being unaffected by sulphur fumes and ammonia gases.

Unlined Smoke-stacks, Boiler Fronts and Other Hot Surfaces

"R. I. W." SMOKE STACK PAINT

Covers approximately 400 to 500 sq. ft. per gal., one coat.

A glossy black paint for exterior and interior exposure.

Will not crack, peel or blister under the influence of ordinary heat or cold, or when subjected to the chemical action of smoke and gases.

Is flexible, thoroughly waterproof, and will withstand exposure on the stacks of ferry-boats and factories.

Ideal for boiler fronts and similar hot surfaces.

Roofs,—Tin, Shingle and Other Roofing

No. 370 "R. I. W." ROOF PAINT

Covers approximately 200 sq. ft. per gal., one coat.

A waterproof, sun-proof, elastic roof paint, dark maroon in color.

Adheres firmly and may be applied to tin, wood shingles and other roofing.

No. 370 "R. I. W." Roof Paint is a real rust preventive, the economy of which will be found not in the price per gallon, but in the length of its effective service.

Roofs, Valleys, Canvas Decks, Flashings, Copings, Etc.

"R. I. W." PLUG-A-LEAK

Covers approximately 50 to 60 sq. ft. per gal., one coat.

Roofs of tin, shingles, composition and other construction can be given added years of service by a thorough application of "R. I. W." Liquid Plug-a-Leak.

Usually furnished in the consistency of a heavy-bodied paint of fibrous nature for application with an ordinary three-knot roof brush.

This material is waterproof, elastic, adheres firmly and is unaffected by temperature changes, acids or alkalis.

Coat the entire roof, or, if the roof is bad only in spots, it can be repaired by covering the hole with a piece of cloth, muslin, or other fabric, saturated with "R. I. W." Liquid Plug-a-Leak, and then swabbing the entire surface liberally with "R. I. W." Liquid Plug-a-Leak.

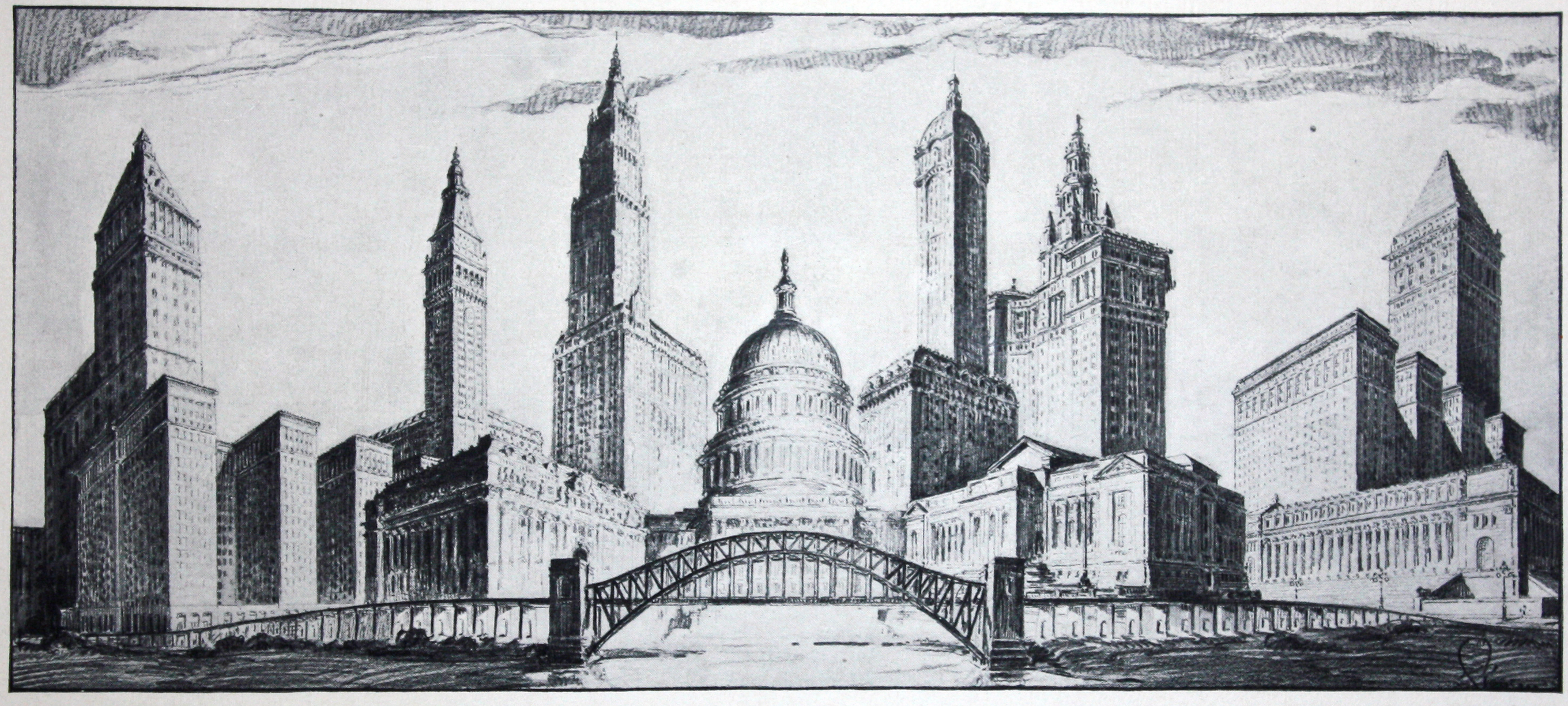
Sold in plastic form for pointing up chimneys, flashings and other places where a liquid material would be too thin for use.

SPECIAL SHADES

Special shades of paint or enamel will be made to order if not less than five gallons of one shade are ordered at a time; the price being contingent upon color of material and quantity ordered.

INDEX

TOCH CITY



Union Central Life
Cincinnati, Ohio

General Motors Co.
Detroit, Mich.

Metropolitan Tower
New York

U. S. Custom House
New York

Woolworth Bldg.
New York

Capitol
Washington, D. C.

Hell Gate Bridge
New York

Singer Bldg.
New York

Public Library
New York

Municipal Bldg.
New York

Hotel Pennsylvania
New York

Bankers Trust Co.
New York

Post Office
Eighth Ave., New York

THE AUTHORITY OF ACCOMPLISHMENT

We have grouped herein some of the more prominent structures protected and preserved with Toch's "R. I. W." Paints and Compounds. The group is graphic evidence of the bigness of Toch accomplishment, and we have, therefore, taken the liberty of naming the composite picture—Toch City.

Toch Brothers

ESTABLISHED 1848

TOCH BROTHERS'

R.I.W. PROTECTIVE PRODUCTS

REMEMBER IT'S WATERPROOF

Reg. U. S. Pat. Off.

Comprise a complete line for the preservation and decoration of wood, metal, plaster, concrete and other surfaces, and include:

TECHNICAL PAINTS
CONCRETE FLOOR COATINGS
WATERPROOFING COMPOUNDS
DAMP-RESISTING PAINTS
CEMENT AND MORTAR COLORS
STEEL PRESERVATIVE PAINTS
INTERIOR WALL COATINGS
ENAMELS, VARNISHES
SPECIALTIES

Steel Need Not Rust! **Wood Need Not Rot!** **Nor Concrete Dust!**

Interesting and informative literature sent upon request

[BLANK PAGE]

API INTERNATIONAL

CCA